

## parameter costs help compare buildings

parameter costs are more meaningful measures for comparing building costs on a total square foot or cube costs.

The latter are generally misleading when used for cost comparisons. None of these cost comparison tools is so simple, however, that it adjusts for differences in building shapes, finishes, or usual foundation conditions.

The parameter cost system is superior because it relates the cost of each standard trade to the physical measure (parameter) of the building that is the chief determinant of that trade.

The table below provides parameter

costs and the percentage breakdown of where the building dollar went for three buildings completed between December, 1969, and March, 1970.

The court house in Port Washington, Wis., and the Atlanta office building demonstrate how parameter costs disclose big differentials, which may reflect the owner's preference or unusual costs. The office had 50% more air conditioning tonnage, but lower heating requirements, yet its HVAC cost half as much per square foot of finished area. It had more plumbing fixtures, yet the owner spent half as much for plumb-

ing. By contrast, the owner spent much more for its curtain wall (precast concrete) and glass than the court house.

Building costs reported here are supplied to ENR by leading contractors, all members of ENR's 400 largest contractors in 1969: Holder Construction Co., Atlanta, Joseph P. Jansen Co., Milwaukee, and Leonard Shaffer Associates, Philadelphia.

Previous building parameter cost reports appeared in the ENR cost reports for 12/15/66, 3/16/67, 6/20/68, 12/19/68, 3/20/69, 6/19/69, 9/18/69 and 3/19/70.

Code of building	.....
Location	.....
Construction start/complete	.....
Use of owner	.....
Measure	.....
Exterior walls	.....
Rating	.....
PARAMETER MEASURES:	
No. of floors excl basement	.....
No. of floors incl basement	.....
Basement plan area	.....
Basement area, total	.....
No. of basement floors	.....
Gross area supported (excl slab on grade)	.....
Face brick area	.....
Interior partitions	.....
Curtain wall, incl glass	.....
Net finished area	.....
Other exterior masonry wall	.....
Number of elevators	.....
Store front perimeter	.....
No. of plumbing fixtures (sinks, toilets)	.....
Parking area	.....
OTHER MEASURES:	
Dry height, typical floor	.....
obby area	.....
Conditioning	.....
No. of rooms	.....
No. of apartments	.....

Court house Port Washington, Wls. Oct '68/Jan '70 Public Rein conc. masonry curtain wall 4 hr.
4
5
13,843 sf
13,843 sf
1
55,372 sf
5,492 lf
26,034 sf
69,215 sf
26,034 sf
3
69
open paved 13,000 sf

Warehouse and office Philadelphia, Pa. Jun '69/Dcc '69 Private Struc. steel/metal deck/rein conc. Brick/block load bear n.a.	
1	
1	
0	
0	
—	
—	
—	
25,000 sf	
0	
—	
open paved, 16,182 sf, 22 cars	

Office Atlanta, Ga. July '69/Mar '70 Private Precast prestressed conc. Precast conc and glass AAA
5
5
19,453
0
0
77,800 sf
<hr/>
6,720 lf
36,508 sf
97,253 sf
<hr/>
2
13 lf
<hr/>
81
open, paved, 152,200 sf

13 ft 4 in  
382 sf  
211 ton, central electric, interior feed

22 ft  
central electric, interior feed

12 ft  
325 ton, central electric, interior feed

Parameter Costs:				Total Cost:				Parameter Costs:				Total Cost:				Parameter Costs:				Total Cost:			
Code	Unit	Cost		Amount	%			Code	Unit	Cost		Amount	%			Code	Unit	Cost		Amount	%		
RADE								5	sf	3.61		199,699	11.1			5	sf	1.85		144,016	9.6		
General conditions and fee				48,872	2.7			9	sf	1.35		33,870	13.7			5	sf	1.85		144,016	9.6		
Excavation				0	0			9	sf	0.42		10,500	4.2			3	sf	0.15		2,917	0.2		
Foundation				0	0			9	sf	1.33		33,366	13.5			5	sf	3.70		287,873	19.2		
Concrete arch or formed concrete				2,091	0.1			9	sf	1.25		35,955	14.5			9	sf	1.94		4,863	0.3		
Exterior masonry				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Interior masonry				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Stone, granite, marble				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Structural steel				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Miscellaneous metal, including stairs				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Ornamental metal				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Plumbing				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Waterproofing and dampproofing				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Roofing and flashing				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Steel doors and frames				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Steel windows				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Wood doors, windows and trim				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Hardware				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Glass and glazing, total				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Store front and lobby only				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Curtain wall				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Plaster and plaster				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
Plaster				0	0			9	sf	1.25		31,224	12.6			2	flr	3.696		18,478	1.2		
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